

10,656, 182

fre



Docket No.: M4065.0248/P248-C
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Allen McTeer

Application No.: Not Yet Assigned

Group Art Unit: 2822

Filed: September 5, 2003

Examiner: Eugene Lee

For: A MULTI-LAYERED COPPER BOND PAD
FOR AN INTEGRATED CIRCUIT

RESPONSE TO ELECTION RESTRICTION REQUIREMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated July 23, 2004, Applicant provisionally elects the species of Figures 1-8 (Embodiment I) for continued examination. Claims 74-78 are readable on the elected species.

Applicant's election is made with traverse. Applicant notes that MPEP § 803 provides that "[I]f the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions." In the present application, the total number of claims is only ten and, therefore, the search and examination of ten claims can be made without serious burden by the Examiner.

In addition, Applicant submits that claims 74-83 define closely related subject matter that can be searched and examined without serious burden. Claims 74-78 are directed to a copper band pad comprising a titanium-implanted copper layer, while claims 79-83 are also directed to a copper bond pad containing a copper layer with a titanium-

aluminum-copper-nitrogen layer formed over the copper layer. Specifically, claims 74-78 recite a “copper bond pad for a semiconductor device” comprising “a dielectric layer,” “a barrier layer formed over said dielectric layer” and “a copper layer formed over said barrier layer, said copper layer having an upper surface implanted with titanium.” Claims 79-83 recite an “interconnect structure for a semiconductor die” comprising “a conductive bond pad containing a copper layer” and “a titanium-aluminum-copper-nitrogen layer formed over at least an upper surface portion of said copper layer.” Thus, all claims 74-83 define closely related subject matter that can be searched and examined in the present application without serious burden. Applicant also notes that the search for claims 74-78 would necessarily overlap the search for claims 79-83 and no undue burden would be involved in examining these claims together.

An action on the merits of all the claims and a Notice of Allowance are respectfully requested.

Dated: August 13, 2004

Respectfully submitted,

By 

Thomas J. D'Amico

Registration No.: 28,371

Gabriela Coman

Registration No.: 50,515

DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP

2101 L Street NW

Washington, DC 20037-1526

(202) 785-9700

Attorneys for Applicant